AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-5. (Cancelled)

6. (Previously Presented) A sterilization system for a medical product, comprising:

a controlled radiation source effective to provide a dose of radiation along a radiation path;

a calorimeter controller configured to perform the steps of a radiation dosimetry control method; and

a calorimeter;

wherein the dosimetry control method comprises causing the radiation source to provide a dose of radiation and measuring the temperature of the calorimeter at an interval determined by the calorimeter controller based on the dose of radiation provided.

7. (Original) The sterilization system for a medical product of claim 6, further comprising a conveyor effective to convey said thermistor calorimeter through said radiation path within a short time.

8. (Original) The sterilization system for a medical product of claim 7, wherein said conveyor is effective to convey the thermistor calorimeter along a short, closed-loop route at a rate effective to convey the thermistor calorimeter from a starting position to an ending position within a short time.

9. (Original) The sterilization system for a medical product of claim 8, wherein said controlled radiation source comprises a high dose-rate source.

10. (Original) The sterilization system for a medical product of claim 9, wherein said high dose-rate radiation source is an electron radiation source effective to provide a dose of electron beam radiation.

11-30. (Cancelled)

31. (Previously Presented) A system for routine dosimetry for quality control of a radiation process, comprising:

a controlled radiation source effective to provide a dose of radiation along a radiation path;

a calorimeter controller configured to perform the steps of a radiation dosimetry control method; and

a calorimeter;

wherein the dosimetry control method comprises causing the radiation source to provide a dose of radiation and measuring the temperature of the calorimeter at an interval determined by the calorimeter controller based on the dose of radiation provided.

32. (Original) The system of claim 31, further comprising a conveyor effective to convey said thermistor calorimeter through said radiation path within a short time.

33. (Original) The system of claim 32, wherein said conveyor is effective to convey the thermistor calorimeter along a short, closed-loop route at a rate effective to convey the thermistor calorimeter from a starting position to an ending position within a short time.

34. (Original) The system of claim 31, wherein said controlled radiation source comprises a high dose-rate radiation source.

35. (Original) The system of claim 34, wherein said high dose-rate radiation source is an electron radiation source effective to provide a dose of electron beam radiation.

36. (Original) The system of claim 35, wherein the dose of electron beam radiation is between about 0.1 kGy to about 100 kGy.

37. (Original) The system of claim 35, wherein the dose of electron beam radiation is between about 2 kGy to about 70 kGy.

38. (Original) The system of claim 35, wherein the dose of electron beam radiation is between about 3 kGy to about 40 kGy.

39. (Cancelled)

40. (Original) The system of claim 31, wherein said calorimeter is a thermistor calorimeter, and further comprising a movable robotic arm having a resistance measuring device effective to contact the thermistor calorimeter and to obtain a resistance measurement therefrom.

41. (Original) The system of claim 31, wherein the steps that said calorimeter controller is configured to perform comprise the steps of accepting for use only validated calorimeters, determining whether the target radiation dose from said controlled radiation source has been changed, maintaining said interval constant if said target radiation dose has not been changed, prompting a routine calorimeter dosimetry if said target radiation dose has been changed, and managing the printing of a process report.

42. (Cancelled)

43. (Original) The system for routine dosimetry of claim 31, wherein said controller comprises an automatic controller.

44. (Original) The system of routine dosimetry of claim 43, wherein said automatic controller comprises a computer-controlled automatic controller.